WHAT IS CLAIMED IS:

1. A method of manufacturing an antistatic film comprising the steps of:

preparing a plurality of sample films with electrostatic charges (V) and surface resistivity (R), at least one of said electrostatic charges (V) and surface resistivity (R) differing stepwise from one another;

making a simulation of static trouble outbreaks by running said sample films through a given simulation equipment under specified conditions;

expressing electrostatic charges (V) and surface resistivity (R) of said sample films that cause static troubles in said simulation of static troubles in a orthognal R-V coordinate diagram;

defining a proper rang of electrostatic property for said antistatic film on said R-V orthognal coordinate diagram that excludes electrostatic charges (V) and surface resistivity (R) of said sample films that cause unacceptable static troubles; and

designing and manufacturing said antistatic film so as to satisfy said proper range of electrostatic property.

2. A method of manufacturing antistatic films as defined in claim 1, wherein said proper range of electrostatic charges (V) and surface resistivity (R) is defined accordingly to types and intended applications of antistatic films.

3. A method of manufacturing antistatic films as defined in claim 1, wherein said antistatic film is an X-Ray film with a surface protection layer and sample X-Ray films are made different stepwise in electrostatic charges by adding one or more surface active agents selected from a group of fluorochemical surface active agents and polyoxyethylene surface

active agents to surface protection layers of said sample X-Ray films.

4. A method of manufacturing antistatic films as defined in claim 3, wherein said simulation of static trouble outbreaks is carried out under ambient conditions of a temperature in a range from 10°C to 35°C and a relative humidity lower than 25%.

5. A method of manufacturing antistatic films as defined in claim 3, wherein said simulation of static trouble outbreaks is carried out under the greatest level of loading that is applied to said antistatic X-Ray films during practical use.

6. A method of manufacturing antistatic films as defined in claim 3, wherein said simulation of static trouble outbreaks is carried out by running said sample X-Ray film by rollers made of either one of chloroprene rubber and nitrile rubber under conditions of a film transport speed in a range from 10 m/min to 20 m/min and a nip pressure in a range from 4 kg/cm^2 to 5 kg/cm^2.

7. A method of manufacturing antistatic films as defined in claim 3, wherein said proper range of electrostatic property for said antistatic X-Ray film is defined by a range of surface resistivity from $10^{11}\Omega$ to 10^{14} Ω between electrostatic charges of -0.8×10^{-9} and 1.2×10^{-9} Q/cm^2.

8. A method of manufacturing antistatic films as defined in claim 1, wherein said antistatic film is an X-Ray film with a surface protection layer and sample X-Ray films are made different stepwise in surface resistivity by adding fine particles of a metal oxide selected from a group of ZnO, TiO_2, SnO_2, TAl_2O_3, In_2O_3, SiO_2, MgO, BaO and MoO to

surface protection layers of said sample X-Ray films.

9. A method of manufacturing antistatic films as defined in claim 8, wherein said simulation of static trouble outbreaks is carried out under ambient conditions of a temperature in a range from 10°C to 35°C and a relative humidity lower than 25%.

10. A method of manufacturing antistatic films as defined in claim 8, wherein said simulation of static trouble outbreaks is carried out under the greatest level of loading that is applied to said antistatic X-Ray films during practical use.

11. A method of manufacturing antistatic films as defined in claim 8, wherein said simulation of static trouble outbreaks is carried out by running said sample X-Ray film by rollers made of either one of chloroprene rubber and nitrile rubber under conditions of a film transport speed in a range from 10 m/min to 20 m/min and a nip pressure in a range from 4 kg/cm^2 to 5 kg/cm^2.

12. A method of manufacturing antistatic films as defined in claim 8, wherein said proper range of electrostatic property for said antistatic X-Ray film is defined by a range of surface resistivity from $10^{11}\Omega$ to $10^{14}\ \Omega$ between electrostatic charges of -0.8×10^{-9} and $1.2 \times 10^{-9}\ Q/cm^2$.

13. A method of manufacturing antistatic films as defined in claim 1, wherein said antistatic film is an endless cinematographic film wound in a roll.

14. A method of manufacturing antistatic films as defined in claim 13, wherein

sample cinematographic color positive films have surface protection layers which are made different stepwise in electrostatic charges by adding one or more surface active agents selected from a group of fluorochemical surface active agents and polyoxyethylene surface active agents to said surface protection layers.

15. A method of manufacturing antistatic films as defined in claim 13, wherein said sample cinematographic color positive films have backing layers, respectively, which are made different stepwise in surface resistivity by adding fine particles of a metal oxide selected from a group of ZnO, TiO_2, SnO_2, TAl_2O_3, In_2O_3, SiO_2, MgO, BaO and MoO to said backing layers.

16. A method of manufacturing antistatic films as defined in claim 13, wherein said simulation of static trouble outbreaks is carried out under the greatest level of loading that is applied to said antistatic cinematographic color positive films during practical use.

17. A method of manufacturing antistatic films as defined in claim 13, wherein said simulation of static trouble outbreaks is carried out by running said sample cinematographic color positive film by brain rollers made of either one of chloroprene rubber and nitrile rubber under conditions of a film transport speed in a range from 10 m/min to 20 m/min and a nip pressure in a range from 4 kg/cm^2 to 5 kg/cm^2.

18. A method of manufacturing antistatic films as defined in claim 18, wherein said simulation of static trouble outbreaks is carried out under ambient conditions of a temperature in a range from 10°C to 35°C and a relative humidity lower than 25%.

19. A method of manufacturing antistatic films as defined in claim 1, wherein said antistatic film is a color proof film and said simulation of static trouble outbreaks is carried out under a condition that a sample color proof film is ejected into a stack of a plurality of sample color proof films.

20. A method of manufacturing antistatic films as defined in claim 19, wherein said stack comprises at most five said sample color proof films.

21. A method of manufacturing antistatic films as defined in claim 19, wherein said antistatic is a color proof film having a surface protection layer and sample color proof films are made different stepwise in electrostatic charges by adding one or more surface active agents selected from a group of fluorochemical surface active agents and polyoxyethylene surface active agents to said surface protection layers.

22. A method of manufacturing antistatic films as defined in claim 21, wherein said sample color proof film have backing layers, respectively, which are made different stepwise in surface resistivity by adding fine particles of a metal oxide selected from a group of ZnO, TiO_2, SnO_2, TAl_2O_3, In_2O_3, SiO_2, MgO, BaO and MoO to said backing layers.

23. A method of manufacturing antistatic films as defined in claim 21, wherein said simulation of static clinging outbreaks is carried out under ambient conditions of a temperature in a range from 10°C to 35°C and a relative humidity lower than 25%.

24. A method of manufacturing antistatic films as defined in claim 21, wherein

said proper range of electrostatic property for said antistatic color proof film is defined by a range of surface resistivity greater than $10^{11}\Omega$ regardless of electrostatic charges and a range of surface resistivity less than $10^{11}\Omega$ between surface potentials of –0.5 kV and 0.5 kV 10^{-9}.